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Substitute for form 1449A/PTQ

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

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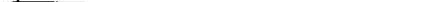
Sheet 1 of 8

<i>Complete if Known</i>	
Application Number	10/604,007
Filing Date	6/20/2003
First Named Inventor	Griffin et al
Group Art Unit	
Examiner Name	
Attorney Docket Number	78.1081-0.6

U.S. PATENT DOCUMENTS

U.S. PATENT DOCUMENTS					
Examiner Initials*	Cite No.*	U.S. Patent Document	Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number	Kind Code* (if known)		
	3,136,915		Bovenkerk	08/09/1984	
XV	3,141,746		DeLei	07/21/1984	
	3,233,888		Wentorf, Jr.	02/04/1986	
	4,108,614		Mitchell	08/22/1978	
	4,151,688		Lee et al	05/01/1979	
	4,224,380		Bovenkerk et al	03/23/1980	
	4,255,168		Dennis et al	03/10/1981	
	4,268,276		Bovenkerk	05/19/1981	
	4,303,442		Hara et al	12/01/1981	
	4,311,490		Bovenkerk et al	01/19/1982	
	4,373,598		Phaal et al	02/15/1983	
	4,387,267		Marezzl	08/07/1983	
	4,412,980		Tsujii et al	11/01/1983	
	4,481,016		Campbell et al	11/08/1984	
	4,488,288		Lewin et al	12/04/1984	
	4,504,519		Zelez	03/12/1985	
	4,522,033		Dyer	08/11/1985	
	4,525,179		Gigli	06/25/1985	
XI	4,554,778		Pphaal et al	08/13/1985	
	4,556,403		Almond et al	12/03/1985	

FOREIGN PATENT DOCUMENTS

Examiner Signature		Date Considered	10/04
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PTO/88-08A (08-00)

Substitute for Form 1449A/PTO		Complete If Known	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(use as many sheets as necessary)</i>		Application Number	10/504,007
		Filing Date	8/20/2003
		First Named Inventor	Griffin et al
		Group Art Unit	
		Examiner Name	
Sheet	2	of	6
		Attorney Docket Number	78.1081-0.5

U.S. PATENT DOCUMENTS

Examiner Initials*	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Paragraphs or Relevant Figures Appear
	Cite No. ¹	Number	Kind Code ² (if known)		
	4,580,014		Geczy	12/24/1985	
	4,570,728		Hall	02/18/1986	
	4,572,722		Dyer	02/26/1986	
	4,605,343		Hibbs Jr et al	08/12/1986	
	4,606,738		Hayden	08/19/1986	
	4,621,031		Scruggs	11/04/1986	
	4,636,253		Nakai et al	01/13/1987	
	4,645,977		Kurokawa et al	02/24/1987	
	4,652,348		Hall et al	08/05/1987	
	4,664,705		Horton et al	05/12/1987	
	4,670,025		Pipkin	08/02/1987	
	4,707,384		Schachner et al	11/17/1987	
	4,726,718		Meskin et al	02/23/1988	
	4,766,040		Hillert et al	08/23/1988	
	4,776,881		Frushtuk	10/11/1988	
	4,792,001		Zjelting	12/20/1988	
	4,793,828		Burnand	12/27/1988	
	4,797,241		Peterson et al	01/10/1989	
	4,802,539		Hall et al	02/07/1989	
	4,807,402		Rai	02/28/1989	

FOREIGN PATENT DOCUMENTS

Examiner Signature		Date Considered	10/04
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INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(use as many sheets as necessary)</i>				Complete If Known	
Sheet	3	of	6	Application Number	10/804,007
				Filing Date	8/20/2003
				First Named Inventor	Griffin et al
				Group Art Unit	
				Examiner Name	
				Attorney Docket Number	78.1081-0.6

U.S. PATENT DOCUMENTS

Examiner Initials	Case No.	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Column, Line, Where Relevant Passages or Relevant Figures Appear
		Number	Kind Code ^a (If Known)			
	4,828,682			Frushour	06/09/1989	
	4,861,350			Pheal et al	08/29/1989	
	4,871,377			Frushour	10/03/1989	
	4,899,922			Slutz et al	02/13/1990	
	4,919,220			Fuller et al	04/24/1990	
	4,940,180			Martell	07/10/1990	
	4,943,488			Sung et al	07/24/1990	
	4,944,772			Cho	07/31/1990	
	4,976,324			Tibbitts	12/11/1990	
	5,027,912			Juergens	07/02/1991	
	5,030,276			Sung et al	07/09/1991	
	5,082,887			Hall	03/03/1992	
	5,116,566			Sung et al	03/26/1992	
	5,127,923			Bunting et al	07/07/1992	
	5,135,081			Newton Jr	08/04/1992	
	5,176,720			Martell et al	01/05/1993	
	5,186,729			Martell et al	02/16/1993	
	5,199,832			Meekin et al	04/06/1993	
	5,205,684			Meekin et al	04/27/1993	
	5,213,248			Horton et al	05/25/1993	

FOREIGN PATENT DOCUMENTS

Examiner Signature		Date Considered	10/69
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**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**

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Sheet 4 of 6

Complete if Known

Application Number	10/804,007
Filing Date	6/20/2003
First Named Inventor	Griffin et al
Group Art Unit	
Examiner Name	
Attorney Docket Number	7B.1081-0.8

U.S. PATENT DOCUMENTS

Examiner Initials ¹	Cite No. ²	U.S. Patent Document Number	Kind Code ³ (if known)	Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Column, Lines, Where Relevant Passages or Relevant Figures Appear
X		5,235,074		Tibbitts	08/24/1993	
		5,264,283		Waldenstrom	11/23/1993	
		5,337,844		Tibbitts	08/15/1994	
		5,379,853		Lockwood	01/10/1995	
		5,439,492		Anthony et al	08/08/1995	
		5,464,068		Najafi-Sani	11/07/1995	
		5,468,288		Tank et al	11/21/1995	
		5,498,638		Waldenstrom	03/05/1996	
		5,505,740		Tank et al	04/09/1996	
		5,510,193		Cerutti et al	04/23/1996	
		5,523,121		Anthony et al	08/04/1996	
		5,624,719		Dannis	08/11/1996	
		5,580,718		Tank et al	10/01/1996	
		5,607,024		Keith et al	03/04/1997	
		5,620,362		Cho et al	04/15/1997	
		5,624,068		Waldenstrom et al	04/29/1997	
		5,667,028		Truxax et al	09/16/1997	
		5,718,948		Edervd et al	02/17/1998	
A		5,722,498		Nguyen et al	03/03/1998	
A		5,778,615		Wnng et al	07/07/1998	

FOREIGN PATENT DOCUMENTS

Examiner Initials ¹	Cite No. ²	Foreign Patent Document Office ³ Number ⁴	Kind Code ³ (if known)	Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Column, Lines, Where Relevant Passages or Relevant Figures Appear	TB
A		EP 0300685	A2	Smith International Inc.	01/25/1989		
		EP 0329954	B1	General Electric Company	08/16/1993		
		EP 0500253	B1	Sumitomo Electric	11/12/1997		
		EP 0585830	B1	CSIR	01/07/1998		
		EP 0695831	B1	CSIR	04/09/1998		
		FP 0812868	B1	Sumitomo Electric	07/22/1998		
		EP 0817207	A3	DeBeers Industrial	09/28/1994		
		EP 0787820	A2	Saint-Gobain/Norton	08/06/1997		
A		EP 0880515	A1	DeBeers Industrial	08/26/1998		
A		UK 2048927	A	DeBeers Industrial	12/17/1990		

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

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Sheet 5 of 8

U.S. PATENT DOCUMENTS

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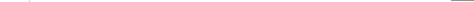
PAGE 10/11 * RCVD AT 6/7/2004 10:31:34 AM [Eastern Daylight Time] * SVR:USPTO-EFXRF-1/0 * DNI:8729306 * CSID:USPTO * DURATION (mm:ss):00-00

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<p style="text-align: center;">INFORMATION DISCLOSURE STATEMENT BY APPLICANT</p> <p><i>(use as many sheets as necessary)</i></p> <p>Sheet 5 of 8</p>				<p style="text-align: right;">U. S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE</p> <p style="text-align: right;">OMB 0651-0031 07/23/2002</p> <p style="text-align: right;"><small>Subpart F of the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.</small></p>	
				Complete If Known	
				Application Number Filing Date First Named Inventor Group Art Unit Examiner Name Attorney Docket Number	10/604,007 June 20, 2003 Griffin et al. 1775 Turner 78.1081-06

OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS

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Form PTO-1449 (modified)

AUG 16 2004

Atty. Docket No.

78.1081-0.6

Serial No.

10/604,007

List of Patents and Publications for Applicant's

Applicant

Nigel Dennis Griffin and Peter Raymond Hughes

INFORMATION DISCLOSURE STATEMENT

(Use several sheets if necessary)

Filing Date:

August 20, 2003

Group:

1775

U.S. Patent Documents

See Page I

Foreign Patent Documents

See Page I

Other Art

See Page I

U.S. Patent Documents

Exam. Init.	Ref. Des.	Document Number	Date	Name	Class	Sub Class	Filing Date of App.
	A1	4,224,380	9/23/80	Bovenkerk <i>et al.</i>	428	545	
	A2						
	A3						
	A4						
	A5						

Foreign Patent Documents

Exam. Init.	Ref. Des.	Document Number	Date	Country	Class	Sub Class	Translation Yes/No
	B1	0 617 207 A3	3/25/94	Europe	F16C	33/04	Yes
	B2	WO 00/28106	5/18/00	PCT	C23C	16/04	Yes
	B3						

Other Art (Including Author, Title, Date Pertinent Pages, Etc.)

Exam. Init.	Ref. Des.	Citation
	C1	International Search Report for PCT/GB01/03986, dated 2/18/02
	C2	International Search Report for PCT/GB01/02638, dated 2/18/02
	C3	

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